The Brabant-style gros of Dendermonde: counterfeit or official issue?

Jos Benders, Ellen L. Wijgård Randerz & Jon Anders Risvaag *

Summary

Metallurgic analysis is applied to determine the silver content of an imitation gros tournois, presumably struck at Dendermonde. The results are used to discuss whether or not this type is a (contemporary) forgery.

Samenvatting

Aan de hand van de resultaten van een metallurgische analyse is het zilvergehalte bepaald van een Tourse groot die in Dendermonde zou zijn geslagen. De bevindingen worden gebruikt om te bespreken of de munt een eigentijdse vervalsing is.

As of now, it is contested whether or not a gros tournois, allegedly struck at Dendermonde, is an official issue, as Martiny recently argued (2016: 118-119 & 122), or a plated forgery, as Phillips classified them (2014: 128-129). The coin in question imitates a Brabantian-style gros tournois. The obverse shows a castle gate, surrounded by the legend MONETA DEREMOE. Deremoe stands for the Flemish town of Dendermonde. The legend of the outer circle is a variant of the religious dictum 'Sit nomen domini benedictum', while the inner circle reads DRAB'ANTIE Dh'. This mimics the legend BRABANTIE DVX on gros tournois of Brabant, struck for Duke John II (1294-1312).

Figure 1's obverse is known from gros tournois issued in Dendermonde by three successive regents of Flanders: William of Jülich (1302), John of Namur (1302-1303) and Philip of Chieti (1303-1304). These coins too have been subject of much debate – by now there appears to be a consensus that Tourneur was right when he argued that they are official emissions issued during the wars between Flanders and France. They are all debased, although apparently to varying degrees. At best, Tourneur considered some gros of William of Jülich 'passable'. Later, several of these coins have been described being of silver (De Mey, 1985; Gheerardijn, 2014; Martiny, 2016). There do not seem to be any doubts about their authenticity (cf. Phillips, 2014: 131), although forgeries may also exist.

* All the authors are at NTNU, the Norwegian University of Science and Technology. Jos Benders is also at KU Leuven. Contact: NTNU, Fakultet for økonomi, Alfred Getz vei 3, 7491 Trondheim. ✉: jos.benders@ntnu.no

Figure 1: ‘Dendermonde’, gros tournois, ex hoard Leuven ‘1962’ (Coin Cabinet, Royal Library of Belgium, Brussels, 2012-108; photos: J.-C. Martiny; scale 200%)

In 1968, the Dendermonde issue with “DRAB’ANTIE Dh’” was first published (De Mey, 1985: 37, who refers to ‘Bul. Num. 1968 p. 17’; we were unable to trace this source). 19 of them were found in a hoard discovered in Leuven or surroundings, presumably in 1962 (Ghyssens, 1983). Two others were part of a hoard found in Brussels, probably in 1939 but only first published in 1983 (Lucas, 1983; Haeck, 1996: 150). The specimens of the Leuven hoard were donated to the Coin Cabinet in Brussels, and their pictures were published by Martiny (2016: 138-141). These pictures show that most of these coins are in a poor condition, as holds true for virtually all other specimens known. The poor condition is undoubtedly caused by the high percentage of base metals, but the issue remains: how much silver did they contain? Can they be considered official emissions, as Martiny maintains and as is argued for the Dendermonde gros of the three Flemish regents, or are they plated (silver wash?) forgeries, as Phillips claims, although without providing arguments?

Metallurgic analysis

The only way to proceed in this debate is metallurgic analysis. The poorly preserved specimen shown in Figure 2 was investigated by the second author using X-ray fluorescence spectroscopy (XRF). The equipment in use was a portable XRF (NitonXL3t GOLDD+) by Termo Scientific. The measuring point was ø 3 mm on the surface. The coin was not submitted to cleaning prior to the analyses. The equipment used is not suited for exact analysis of the coin’s alloy. However, it is well-suited for detecting even the smallest traces of

silver. Consequently, if the coin initially had contained even a small part of silver, this should be detected. Studies of the coin using a stereo microscope have shown that the color of the intact surface differs from the damaged parts.

Figure 2: The analysed specimen of the Dendermonde gros tournois (scale 200%)

Table 1 contains the results of two analyses, one of a well-preserved area and one of a damaged area.

Table 1: Results of two metallurgic tests on a Dendermonde gros with Brabantian obverse (composition in %; LOD = limit of detection; < LOD = the amount is too small to be detected)

Duration (seconds)	Iron (Fe)	Copper (Cu)	Silver (Ag)	Zink (Zn)	Lead (Pb)	Tin (Sn)
100.81	1.004	75.177	< LOD	0.721	1.542	17.629
100.42	0.636	87.037	< LOD	0.522	1.432	9.835

Regarding the silver content, the results of the XRF analysis are clear: no traces of silver could be detected in the coin. It primarily consists of a copper-tin alloy, with a small element of lead. Further measuring was not deemed necessary as our research question was clearly answered. Obtaining exact measurements of the proportions of the alloy calls for more detailed analyses, which is not necessary for the issue discussed here.

However, a puzzling finding is the relatively high level of tin: a high degree (18%) on the well-preserved area, and a lower degree (10%) on the damaged area. Both measurements vary considerably, yet point to a substantial amount.

It is unlikely that the tin is part of the alloy: if this contains more than 12% tin, it is very hard to strike (Moesta & Franke, 1995: 136-137). Alternatively, the tin could be part of a coating on the coin's surface (to make the surface appear as silver) which eroded in the course of time. The coin's uneven surface indeed suggests such erosion. Yet another possibility is that the tin on the surface resulted from corrosion on top of the copper core. However, the difference in color and appearance between core and surface makes it highly unlikely that corrosion is cause of the high level of tin. In sum then, the most probable explanation is that the surface was coated with tin.

Conclusion

The absence of silver allows us to draw a firm conclusion: the researched coin was a forgery, likely coated with tin. This method of forgery was also used for the roughly contemporary maille blanche, mentioning one Willem Miles as issuer (Benders, 2016).

The researched coin may of course have been a forgery of an official coin. However, the garbled legend DRAB'ANTIE[…] and the poor state of preservation of virtually all other specimens of this type (Haeck, 1996: 150-151; Martiny, 2016: 138-141) suggests that all were contemporary forgeries. In any case, our hypothesis is that they are. Of course, this may be questioned by subjecting other specimens to metallurgic research.

Whereas our arguments make it plausible that the Brabant-style gros of Dendermonde are forgeries, the issue arises whether that holds for the other Dendermonde gros as well. Again, metallurgic research is needed to solve the issue. Unless such research is done, the unreliable method of visual inspection to estimate a coin's silver content is the only way to make a (poorly?) educated guess whether a coin is a forgery or an official issue. This holds the stronger, the more base the Dendermonde gros tournois of the Flemish regents are.

End note

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Biographical notes

Prof. dr. Jos Benders is affiliated with NTNU, Trondheim, and the KU Leuven. As a numismatist, he is mainly interested in late medieval coins from the Low Countries.

Ellen L. Wijgård Randerz Technical Conservator at Department of Archaeology and Cultural History, NTNU University Museum, Trondheim, specializing in conservation of coins and metals.

Dr. Jon Anders Risvaag is Associate Professor and Keeper of Coins at Department of Archaeology and Cultural History, NTNU University Museum, Trondheim.

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